CHINO AIRPORT

Chapter Six
CAPITAL IMPROVEMENT PROGRAM

Capital Improvement Program

The analyses conducted in the previous chapters evaluated airport development needs based upon safety, security, potential aviation activity, and operational efficiency. However, one of the more important elements of the master planning process is the application of basic economic, financial, and management rationale to each development item so that the feasibility of implementation can be assured. The purpose of this chapter is to identify capital needs at Chino Airport and identify when these should be implemented according to need, function, and demand.

The presentation of the financial plan and its feasibility has been organized into two sections. First, the airport's capital needs are presented in narrative and graphic form. Secondly, funding sources on the federal and local levels are identified and discussed.

DEMAND-BASED PLAN

The master plan for Chino Airport has been developed according to a demand-based schedule. Demand-based planning refers to the intention to develop planning guidelines for the airport based upon airport activity levels, instead of guidelines based on points in time. By doing so, the levels of activity derived from the demand forecasts can be related to the actual capital investments needed to safely and efficiently accommodate the level of demand being experienced at the airport. More specifically, the intention of this master plan is that the facility improvements needed to serve new

levels of demand should only be implemented when the levels of demand experienced at the airport justify their implementation.

For example, the aviation demand forecasts projected that based aircraft could be expected to grow through the year 2025. This forecast was supported by the local community's growing economy, population, households, and historical trends showing growing based aircraft levels.

The forecasts noted, however, that future based aircraft levels will be dependent upon a number of economic factors. These factors could slow or accelerate based aircraft levels differently than projected in the aviation demand forecasts. Since changes in these factors cannot be realistically predicted for the entire forecast period, it is difficult to predict, with the level of accuracy needed to justify a capital investment, exactly when an improvement will be needed to satisfy demand level.

For these reasons, the Chino Airport master plan has been developed as a demand-based plan. The master plan projects various activity levels for short, intermediate, and long term planning horizons. When activity levels begin to reach or exceed the level of one of the planning horizons, the master plan suggests planning begin to consider the next planning horizon level of demand. This provides a level of flexibility in the master plan as the development program can be accelerated or slowed to meet demand. This can extend the time between master plan updates.

A demand-based master plan does not specifically require implementation of any of the demand-based improvements. Instead, it is envisioned that implementation of any master plan improvement would be examined against demand levels prior to implementation. In many ways, this master plan is similar to a community's general plan. The master plan establishes a plan for the use of the airport facilities consistent with potential aviation needs and the capital needs required to support that use. However, individual projects in the plan are not implemented until the need is demonstrated and the project is approved by San Bernardino County.

CAPITAL NEEDS AND COST SUMMARIES

Once the specific needs for the airport have been established, the next step is to determine a realistic schedule and costs for implementing each project. The capital needs presented in this chapter outline the costs and timing for implementation. The program outlined on the following pages has been evaluated from a variety of perspectives and represents the culmination of a comparative analysis of basic budget factors, demand, and priority assignments.

The recommended improvements are grouped into three planning horizons: short, intermediate, and long term. Each year, San Bernardino County will need to re-examine the priorities for funding in the short-term period,

adding or removing projects on the capital programming lists. **Table 6A** summarizes the key activity milestones for each planning horizon.

TABLE 6A
Planning Horizon Milestones

	2001	Short Term	Intermediate Term	Long Term
Based Aircraft				
Standard General Aviation Aircraft	797	920	1,005	1,180
Vintage Aircraft	171	180	185	195
Total Based Aircraft	968	1,100	1,190	1,375
Operations				
General Aviation	144,999	165,000	178,500	206,300
Air Taxi	349	700	1,200	2,700
Military	143	400	400	400
Total Operations	145,491	166,100	180,100	209,400

While some projects will be demand-based, others will be dictated by design standards, safety, or rehabilitation needs. In putting together a listing of projects, an attempt has been made to include anticipated rehabilitation needs through the planning period and capital replacement needs. However, it is difficult to project with certainty the scope of such projects when looking 10 or more years into the future.

Exhibit 6A summarizes capital needs for Chino Airport through the planning period of this master plan. An estimate has been included with each project of federal funding eligibility, although this amount is not guaranteed.

Individual project cost estimates account for engineering and other contingencies that may be experienced during implementation of the project and are in current (2002) dollars. Due to the conceptual nature of a master plan, implementation of capital improvement projects should occur only after further refinement of their design and costs through engineering and/or architectural analyses. Capital costs in this chapter should be viewed only as estimates subject to further refinement during design. Nevertheless, these estimates are considered sufficient for performing the feasibility analyses in this chapter.

Capital needs for the airport can be categorized as follows:

1) **Maintenance -** Maintaining the existing infrastructure is a priority. The capital needs program provides for the continued maintenance and rehabilitation of the airport's pavement areas.

2) **Safety -** Of utmost importance with any transportation facility is safety and security. All projects in the plan are designed according to Federal Aviation Administration

(FAA) design standards. This is carried throughout the other areas of focus. The safety needs in the capital needs program are considered necessary for the operational safety and protection of aircraft and/or people and property on the ground near the airport.

3) **Environmental** – The airport must operate within federal and state environmental guidelines. The capital needs program includes items to enable the airport to operate in an environmentally-acceptable manner.

4) **Efficiency** - These are capital needs intended to improve aircraft ground operations.

5) **Demand** – The master plan has established future activity levels for the airport. Should these activity levels be reached, it may be necessary to improve existing facilities to safely, efficiently, and securely accommodate the new activity levels. Therefore, the capital needs program includes provisions to accommodate levels of aviation demand. The implementation of these projects should only occur when demand for these needs are verified.

Each capital need is categorized according to this schedule. The applicable category (or categories) are included in parentheses within the description of the capital project. **Table 6B** summarizes capital needs by category.

TABLE 6B
Capital Needs by Category

Category	Short Term	Intermediate Term	Long Term	Total
Maintenance	$6,293,000	$1,980,900	$1,500,000	$9,773,900
Safety	13,720,200	108,500	455,300	14,284,000
Environmental	3,605,000	0	0	3,605,000
Efficiency	4,758,400	0	1,700,000	6,458,400
Demand	0	10,158,800	15,764,200	25,923,000
Total	$28,376,600	$12,248,200	$19,419,500	$60,044,300

SHORT TERM CAPITAL NEEDS

The short term planning horizon is the only planning horizon correlated to time. This is because development within this initial period is concentrated on the most immediate needs of the airfield and landside areas. Therefore, the program is presented year-by-year for the first six years of the program to assist in capital planning not only locally, but at the federal levels. Short term capital needs presented on **Exhibit 6A** are estimated at $28.3 million.

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SHORT TERM PLANNING HORIZON

	DESCRIPTION	TOTAL COST	FEDERALLY ELIGIBLE	STATE ELIGIBLE	LOCAL SHARE
Fiscal Year 2002 (Currently-Funded Projects)					
1.	Reconstruct Runway 8L-26R / Construct Perimeter Service Road - Phase I (Maintenance/Safety)	$ 2,200,000	$ 1,980,000	$ 110,000	$ 110,000
2.	Reconstruct Cal Aero Drive and Stearman Drive / Install New Airport Beacon / Security Improvements (Maintenance/Safety)	538,000	484,200	26,900	26,900
Subtotal 2002		$ 2,738,000	$ 2,464,200	$ 136,900	$ 136,900
Fiscal Year 2003					
1.	Pavement Preservation Itinerant Ramp, Runway 8R-26L, and Taxiways (Maintenance)	$ 455,000	$ 409,500	$ 22,750	$ 22,750
2.	Construct Wash Rack (Environmental)	0	0	0	0
3.	Reconstruct Northwest Apron (Maintenance)	400,000	360,000	20,000	20,000
4.	Reconstruct Taxiway C from Runway 8L-26R to Runway 3 end/ Relocate Runway 3 and 21 Ends/Construct New Taxiways(Maintenance/Safety)	1,500,000	1,350,000	75,000	75,000
Subtotal Fiscal Year 2003		$ 2,355,000	$ 2,119,500	$ 117,750	$ 117,750
Fiscal Year 2004					
1.	Pavement Preservation Runway 3-21, Taxilanes North of ATCT (Maintenance)	$ 600,000	$ 540,000	$ 30,000	$ 30,000
2.	Acquire Avigation Easements and Property Fee Simple to Protect RPZs (Safety)	11,726,000	10,553,400	586,300	586,300
3.	Update Airport Comprehensive Land Use Plan (Environmental)	55,000	0	50,000	5,000
Subtotal Fiscal Year 2004		$ 12,381,000	$ 11,093,400	$ 666,300	$ 621,300
Fiscal Year 2005					
1.	Storm Drainage Improvements Northwest Quadrant (Environmental)	$ 1,850,000	$ 1,665,000	$ 92,500	$ 92,500
2.	Construct Taxiway M South of Runway 8R-26L / Construct Perimeter Service Road - Phase II (Efficiency/Safety)	3,900,000	3,510,000	195,000	195,000
Subtotal Fiscal Year 2005		$ 5,750,000	$ 5,175,000	$ 287,500	$ 287,500
Fiscal Year 2006					
1.	Reconstruct Northwest Taxilanes and Itinerant Apron (Maintenance)	$ 400,000	$ 360,000	$ 20,000	$ 20,000
2.	Construct Taxiway F (Efficiency)	858,400	772,560	42,920	42,920
3.	Relocate Localizer Outside Runway 8L-26R Runway Safety Area (Safety)	100,000	90,000	5,000	5,000
4.	Remove Fire Storage Ponds (Safety)	50,000	45,000	2,500	2,500
Subtotal Fiscal Year 2006		$ 1,408,400	$ 1,267,560	$ 70,420	$ 70,420
Fiscal Year 2007					
1.	Storm Drainage Improvements Southwest Quadrant (Environmental)	$ 1,700,000	$ 1,530,000	$ 85,000	$ 85,000
2.	Construct Public Access Road To Building B-350 (Safety/Security)	46,000	41,400	2,300	2,300
3.	Construct Public Access Road To Building A-485 (Safety/Security)	490,200	441,180	24,510	24,510
4.	Construct Public Access Road To Building A-545 (Safety/Security)	30,700	27,630	1,535	1,535
Subtotal Fiscal Year 2007		$ 2,266,900	$ 2,040,210	$ 113,345	$ 113,345
Fiscal Year 2008					
1.	Pavement Preservation Runway 8L-26R and Taxiways (Maintenance)	$ 200,000	$ 180,000	$ 10,000	$ 10,000
2.	Relocate Taxiways A and AA / Expand Apron (Safety/Security)	834,400	750,960	41,720	41,720
3.	Relocate Buildings A-385 and A-390 / Construct Access and Parking (Safety/Security)	442,900	398,610	22,145	22,145
Subtotal Fiscal Year 2008		$ 1,477,300	$ 1,329,570	$ 73,865	$ 73,865
SUBTOTAL SHORT TERM PLANNING HORIZON		$ 28,376,600	$ 25,489,440	$ 1,466,080	$ 1,421,080

KEY

ATCT - Airport Traffic Control Tower
REIL - Runway End Identifier Lights
HIRL - High Intensity Runway Lighting
MALSR - Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights

INTERMEDIATE TERM PLANNING HORIZON

	DESCRIPTION	TOTAL COST	FEDERALLY ELIGIBLE	STATE ELIGIBLE	LOCAL SHARE
1.	Expand Northeast Apron - Phase I (Demand)	$ 689,700	$ 620,730	$ 34,485	$ 34,485
2.	Construct Perimeter Service Road - Phase III (Demand)	681,700	613,530	34,085	34,085
3.	Construct North Helipad and Automobile Parking (Demand)	474,900	427,410	23,745	23,745
4.	Construct Southwest Hangar Taxilanes (Demand)	1,326,700	1,194,030	66,335	66,335
5.	Extend Utilities to Southwest Hangars (Demand)	93,600	84,240	4,680	4,680
6.	Construct Southwest Hangar Automobile Parking and Access (Demand)	716,400	644,760	35,820	35,820
7.	Install REILs Runways 8R, 8L, 3 (Safety)	58,500	52,650	2,925	2,925
8.	Install Distance-To-Go Signs 8L-26R (Safety)	50,000	45,000	2,500	2,500
9.	Construct Airport Maintenance/Administration Facility (Demand)	500,000	450,000	25,000	25,000
10.	Extend Runway 26R and Taxiway D 642 Feet East (Demand)	1,700,900	1,530,810	85,045	85,045
11.	Construct Public Terminal Building (Demand)	975,000	877,500	48,750	48,750
12.	Construct South Apron - Phase I (Demand)	2,700,000	2,430,000	135,000	135,000
13.	Extend Utilities to South Apron (Demand)	36,400	32,760	1,820	1,820
14.	Construct South Apron Automobile Parking and Access - Phase I (Demand)	263,500	237,150	13,175	13,175
15.	Rehabilitate Grove Avenue (Maintenance)	1,480,900	1,332,810	74,045	74,045
16.	Pavement Preventative Maintenance (Maintenance)	500,000	450,000	25,000	25,000
SUBTOTAL INTERMEDIATE TERM PLANNING HORIZON		$ 12,248,200	$ 11,023,380	$ 612,410	$ 612,410

LONG TERM PLANNING HORIZON

	DESCRIPTION	TOTAL COST	FEDERALLY ELIGIBLE	STATE ELIGIBLE	LOCAL SHARE
1.	Install HIRL to Runway 8R-26L (Safety)	$ 105,300	$ 94,770	$ 5,265	$ 5,265
2.	Relocate ILS to Runway 26L (Efficiency)	1,700,000	1,530,000	85,000	85,000
3.	Install MALSR (Safety)	350,000	315,000	17,500	17,500
4.	Expand Apron Area B East -Phase II (Demand)	1,049,200	944,280	52,460	52,460
5.	Relocate Segmented Circle/Lighted Wind Cone (Demand)	10,000	9,000	500	500
6.	Construct Center Parallel Taxiway and Exit Taxiways (Demand)	2,600,900	2,340,810	130,045	130,045
7.	Construct South Hangar Taxilanes (Demand)	896,500	806,850	44,825	44,825
8.	Construct South Hangar Auto Parking and Access (Demand)	763,100	686,790	38,155	38,155
9.	Extend Utilities to South Hangars (Demand)	124,900	112,410	6,245	6,245
10.	Construct South Apron - Phase II (Demand)	2,700,000	2,430,000	135,000	135,000
11.	Construct South Apron Auto Parking and Access - Phase II (Demand)	263,500	237,150	13,175	13,175
12.	Construct South Helipad (Demand)	474,900	427,410	23,745	23,745
13.	Construct Holding Apron South of Runway 8R (Demand)	330,200	297,180	16,510	16,510
14.	Construct Portion of Walker Avenue - Extend Utilities (Demand)	228,100	205,290	11,405	11,405
15.	Construct Southeast Apron (Demand)	4,100,000	3,690,000	205,000	205,000
16.	Extend Taxiway D East (Demand)	484,200	435,780	24,210	24,210
17.	Construct Northern Portion of Taxiway M (Demand)	704,400	633,960	35,220	35,220
18.	Extend Taxiway M Northeast (Demand)	528,000	475,200	26,400	26,400
19.	Construct Southeast Taxilane (Demand)	506,300	455,670	25,315	25,315
20.	Pavement Preventative Maintenance (Maintenance)	1,500,000	1,350,000	75,000	75,000
SUBTOTAL LONG TERM PLANNING HORIZON		$ 19,419,500	$ 17,477,550	$ 970,975	$ 970,975
GRAND TOTAL		$ 60,044,300	$ 53,990,370	$ 3,049,465	$ 3,004,465

CHINO AIRPORT

Exhibit 6A
AIRPORT DEVELOPMENT SCHEDULE

Over $4.6 million of the $28.3 million in capital projects in the short term planning horizon is devoted to pavement maintenance projects. This includes both pavement reconstruction/ rehabilitation and pavement preservation projects. Pavement preservation projects include the application of a slurry seal coat and/or crack sealing to runway, taxiway, and apron surfaces. The application of the seal coat rejuvenates the pavement surfaces and extends the pavement life. Crack sealing helps to prevent water seepage under the pavement. Water which seeps under the pavement can weaken the subbase and subgrade. This deteriorates the pavement and reduces its useful life. New pavement markings are completed with each pavement maintenance project.

As shown on **Exhibit 6A**, the pavement maintenance projects in the short term planning horizon include:

- Reconstructing Taxiway C from Runway 8L-26R to the relocated Runway 3 end;
- Reconstructing portions of Apron Area A;
- Pavement preservation of the itinerant ramp, Runway 8R-26L, and associated taxiways;
- Pavement preservation of Runway 3-21 and taxilanes north of the airport traffic control tower (ATCT);
- Reconstructing Runway 8L-26R;
- Reconstructing Cal Aero Drive and Stearman Drive; and
- Pavement preservation of Runway 8L-26R and associated taxiways.

Safety projects total approximately $8.8 million of the $28.3 million included in the short term planning horizon. Safety projects are primarily related to meeting FAA design standards on the airfield and segregating vehicle and aircraft operational areas. Safety projects included in the short term planning horizon include:

- Constructing Phase I and Phase II of the perimeter service road;
- Relocating the Runway 3 and 21 ends and constructing new connecting taxiways;
- Relocating the existing localizer antenna outside the Runway 8L-26R runway safety area (RSA);
- Installing a new rotating beacon;
- Acquiring avigation easements over the state-owned land to the east to protect the Runway 8L and Runway 8R runway protection zones (RPZ) and encompass the 65 CNEL contour from incompatible development;
- Acquiring fee simple the land within the existing Runway 26L RPZ;
- Acquiring fee simple the land within the relocated Runway 3 and Runway 21 RPZs and Runway 26L RPZ;
- Constructing a public access road to Building B-350;
- Constructing a public access road to Buildings A-480, A-485, A-490, A-495, A-555, and A-560;
- Constructing a public access road to Buildings A-545 and A-550;

- Removing fire suppression storage ponds in the Runway 26L object free area (OFA);
- Relocating Buildings A-385 and A-390 to the west to allow for public access from Stearman Drive; and
- Relocating Taxiways A and AA (future Taxiways D1 and D2) to meet taxiway centerline to building separation standards.

Environmental projects included in the short term planning horizon include stormwater drainage improvements, the construction of the aircraft wash rack, and the completion of a Comprehensive Land Use Plan (CLUP) for the airport. The aircraft wash rack will be constructed by airport maintenance staff and is planned for completion in 2003. The CLUP will be completed according to state standards. The purpose of the CLUP is to ensure the recommendations of this master plan and planned land uses adjacent to the airport are compatible. Environmental improvements total approximately $3.6 million.

Efficiency improvements include the development of new access taxiways. This includes the development of Taxiway F from Apron Area A to the Runway 3 end and construction of the southwest portion of Taxiway M from Taxiway A to the Runway 3 end. The portion of Taxiway F between the relocated Runway 3 end and Taxiway A is planned to be completed with the reconstruction of Taxiway C and relocation of the Runway 3 end. Efficiency improvements included the short term planning horizon total of approximately $2.8 million.

INTERMEDIATE TERM CAPITAL NEEDS

The intermediate term capital needs focus on airfield safety and capacity improvements, continuing routine airfield maintenance, and providing for infrastructure improvements to support the development of landside faculties as needed to meet demand.

The primary airfield project is the extension of Runway 8L-26R and Taxiway D 662 feet east for a total length of 5,500 feet. This project would bring this runway up to the length recommended by the FAA for aircraft with ARC C-II, the planning standard for this runway.

Airfield lighting projects include the installation of runway end identifier lights (REILs) to the Runway 8L, 8R, 3, and 26R ends. REILs provide positive identification of the runway end at night and help to distinguish the runway ends from other airfield lighting. Distance-to-go signs are planned for Runway 8L-26R. These signs notify pilots of the length of runway remaining and are typically placed on runways with large aircraft use (aircraft over 12,500 pounds).

The development of the helipad and completion of the perimeter service road are also programmed. The completion of the perimeter service road will enable the development of the airport maintenance/administration building as planned along Stearman Drive. The development of a public terminal building is also programmed.

Landside infrastructure improvements to support new commercial fixed base operators (FBOs) and aircraft storage hangars include new apron, utilities, and parking and access areas. The expansion of Apron Area B to the north is planned to support hangar development along Merrill Avenue. This is supported by parking and access improvements. Expansion of Apron Area B between Taxiway C2 and Taxiway H will provide additional area for aircraft circulation and the FBO operations in this portion of the airport.

Phase I development of the taxilanes, automobile parking, access, and utilities in the southwest hangar area is programmed for this planning horizon. This is the area bound by Kimball Avenue to the south and Euclid Avenue to the west. The Phase I development of the south apron, automobile parking, access, and utility extensions are also planned.

Pavement maintenance projects include the reconstruction of Grove Avenue and continued annual pavement preservation. As stated above, this includes regular pavement rejuvenation projects including slurry seal coating and crack sealing.

Intermediate term planning horizon improvements total approximately $13.9 million, of which approximately $1.9 million is devoted to pavement maintenance. Approximately $108,000 is devoted to safety, while the remaining $11.8 million is devoted to infrastructure improvements to support demand-based projects.

LONG TERM CAPITAL NEEDS

The long term planing horizon capital projects include provisions for continued infrastructure improvements to support long term landside development needs. This includes completion of the taxiways, parking, access, and utility extensions in the southwest hangar area. The completion of the south apron is also programmed.

The expansion of Apron Area F to the west and parking and access along Grove Avenue is programmed. The development of the southeast taxilane, construction of Walker Avenue, and automobile parking and access are programmed to facilitate development in the southeast portion of the airport. To support aviation-related commercial/ industrial development in the northeast portion of the airport, the construction of public roads and primary utility extensions are programmed.

The relocation of the existing instrument landing system (ILS) to Runway 26L is included in the long term planning horizon. This includes the installation of a medium intensity approach lighting system with runway alignment indicator lights (MALSR) to enable Category I approaches. Other airfield projects include the development of Taxiways B, G, and J.

Long term planning horizon improvements are estimated to total approximately $28.2 million.

Exhibit 6B graphically depicts development staging.

CAPITAL IMPROVEMENTS FUNDING

Financing capital improvements at the airport will not rely exclusively upon the financial resources of San Bernardino County. Capital improvements funding is available through various grants-in-aid programs at both the federal and state level. The following discussion outlines the key sources for capital improvement funding.

FEDERAL GRANTS

Through federal legislation over the years, various grants-in-aid programs have been established to develop and maintain a system of public airports throughout the United States. The purpose of this system and its federally-based funding is to maintain national defense and promote interstate commerce. The most recent legislation was enacted in early 2000 and is entitled the *Wendell H. Ford Aviation Investment and Reform Act for the 21st Century* or AIR-21.

The four-year bill covers FAA fiscal years 2000, 2001, 2002, and 2003. This was breakthrough legislation because it authorized funding levels significantly higher than ever before. Airport Improvement Program (AIP) funding was authorized at $2.475 billion in 2000, $3.2 billion in 2001, $3.3 billion in 2002, and $3.4 billion in 2003.

The source for AIR-21 funds is the Aviation Trust Fund. The Aviation Trust Fund was established in 1970 to provide funding for aviation capital investment programs (aviation development, facilities and equipment, and research and development). The Trust Fund also finances the operation of the FAA. It is funded by user fees, taxes on airline tickets, aviation fuel, and various aircraft parts.

Funds are distributed each year by the FAA from appropriations by Congress. A portion of the annual distribution is to primary commercial service airports based upon enplanement levels. If Congress appropriates the full amounts authorized by AIR-21, eligible general aviation airports receive up to $150,000 of funding each year. The remaining AIP funds are distributed by the FAA based upon the priority of the project for which they have requested federal assistance through discretionary apportionments. A National Priority Ranking System is used to evaluate and rank each airport project. Those projects with the highest priority are given preference in funding.

Each airport project for Chino Airport must follow this procedure and compete with other airport projects in the State for AIP State Apportionment dollars and across the country for other Federal AIP funds. An important point to consider is that, unlike entitlement dollars for commercial service airports, funding for Chino Airport is not guaranteed.

Reliever airport development that meets FAA's eligibility requirements can receive 90 percent federal funding from AIR-21. Property acquisition, airfield improvements, aprons,

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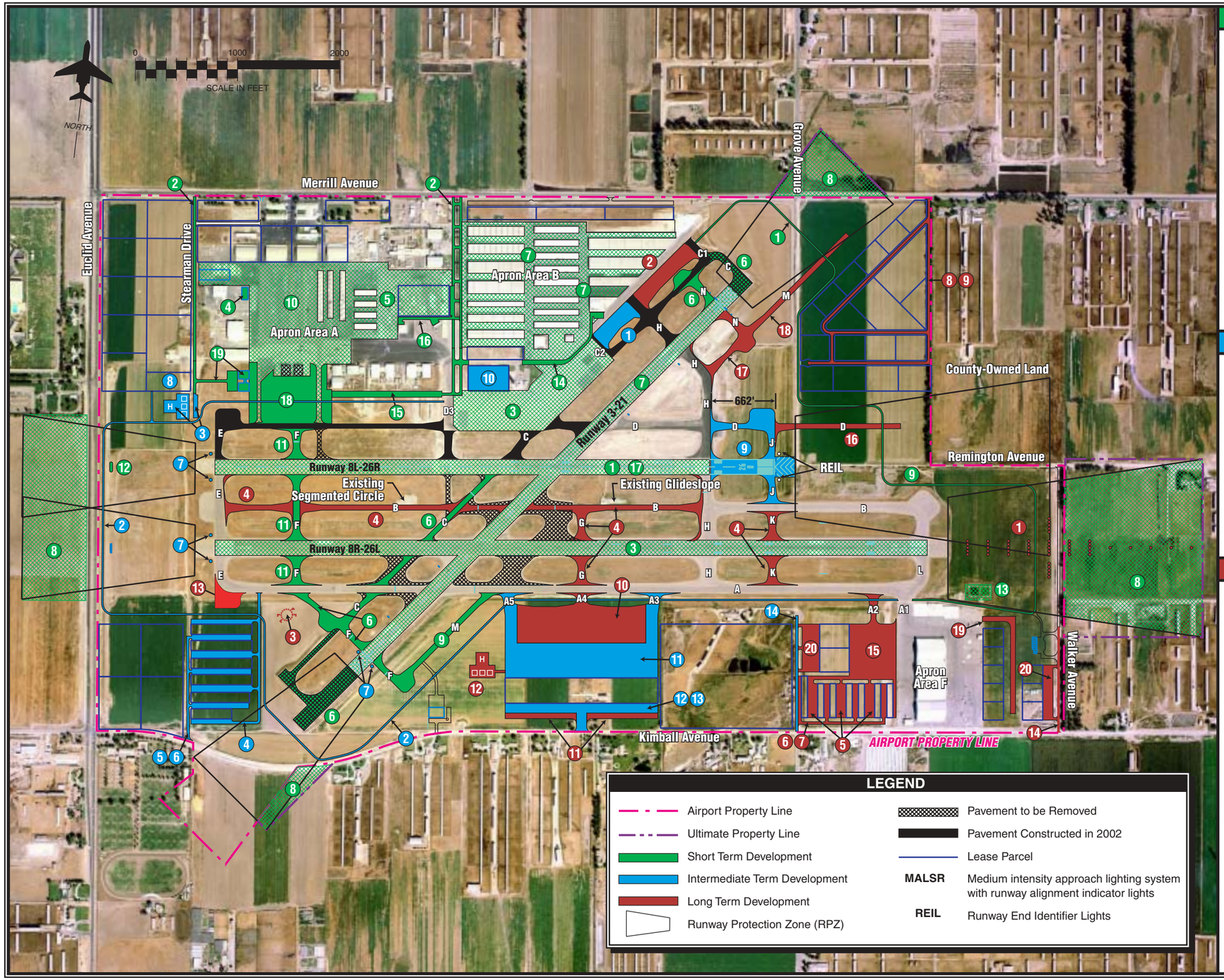

SHORT TERM PLANNING HORIZON

1. Reconstruct Runway 8L-26R / Construct Perimeter Service Road - Phase I
2. Reconstruct Cal Aero Drive and Stearman Drive
3. Pavement Preservation Itinerant Ramp, Runway 8R-26L, and Taxiways
4. Construct Wash Rack
5. Reconstruct Northwest Apron
6. Reconstruct Taxiway C from Runway 8L-26R to Runway 3 end/ Relocate Runway 3 and 21 Ends/Construct New Taxiways
7. Pavement Preservation Runway 3-21, Taxilanes North of ATCT
8. Acquire Avigation Easements and Property Fee Simple to Protect RPZs
9. Construct Taxiway M South of Runway 8R-26L / Construct Perimeter Service Road - Phase II
10. Reconstruct Northwest Taxilanes and Itinerant Apron
11. Construct Taxiway F
12. Relocate Localizer Outside Runway 8L-26R Runway Safety Area
13. Remove Fire Storage Ponds
14. Construct Public Access Road To Building B-350
15. Construct Public Access Road To Building A-485
16. Construct Public Access Road To Building A-545
17. Pavement Preservation Runway 8L-26R and Taxiways
18. Relocate Taxiways A and AA / Expand Apron
19. Relocate Buildings A-385 and A-390 / Construct Access and Parking

INTERMEDIATE TERM PLANNING HORIZON

1. Expand Apron Area B East -Phase I
2. Construct Perimeter Service Road - Phase III
3. Construct North Helipad and Automobile Parking
4. Construct Southwest Hangar Taxilanes
5. Extend Utilities to Southwest Hangars
6. Construct Southwest Hangar Automobile Parking and Access
7. Install REILs Runways 8R, 8L, 3
8. Construct Airport Maintenance/Administration Facility
9. Extend Runway 26R and Taxiway D 642 Feet East
10. Construct Public Terminal Building
11. Construct South Apron - Phase I
12. Extend Utilities to South Apron
13. Construct South Apron Automobile Parking and Access - Phase I
14. Rehabilitate Grove Avenue

LONG TERM PLANNING HORIZON

1. Install MALSR
2. Expand B Apron -Phase II
3. Relocate Segmented Circle/Lighted Wind Cone
4. Construct Center Parallel Taxiway and Exit Taxiways
5. Construct South Hangar Taxilanes
6. Construct South Hangar Auto Parking and Access
7. Extend Utilities to South Hangars
8. Construct Northeast Public Roadways
9. Extend Utilities to Northeast Parcels
10. Construct South Apron - Phase II
11. Construct South Apron Auto Parking and Access - Phase II
12. Construct South Helipad
13. Construct Holding Apron South of Runway 8R
14. Construct Portion of Walker Avenue - Extend Utilities
15. Construct Southeast Apron
16. Extend Taxiway D East
17. Construct Northern Portion of Taxiway M
18. Extend Taxiway M Northeast
19. Construct Southeast Taxilane
20. Construct Southeast Apron Parking and Access

LEGEND

- Airport Property Line
- Ultimate Property Line
- Short Term Development
- Intermediate Term Development
- Long Term Development
- Runway Protection Zone (RPZ)
- Pavement to be Removed
- Pavement Constructed in 2002
- Lease Parcel
- **MALSR** — Medium intensity approach lighting system with runway alignment indicator lights
- **REIL** — Runway End Identifier Lights

CHINO AIRPORT

Exhibit 6B
DEVELOPMENT STAGING

perimeter service roads, and access road improvements are examples of eligible items. General aviation terminal buildings, cargo buildings, and fueling facilities are not generally eligible.

As evident from the airport development schedule and cost summaries, San Bernardino County will rely primarily on federal discretionary funding (since Chino Airport is not a commercial service airport) to implement many of the development needs. An important point to consider is that federal discretionary funding is not guaranteed each year for the airport.

FAA FACILITIES AND EQUIPMENT PROGRAM

The Airway Facilities Division of the FAA administers the national Facilities and Equipment (F&E) Program. This annual program provides funding for the installation and maintenance of various navigational aids and equipment for the national airspace system and airports. Under the F&E program, funding is provided for FAA airport traffic control towers, enroute navigational aids, and on-airport navigational aids such as approach lighting systems. As activity levels and other development warrant, the airport may be considered by the FAA Airways Facilities Division for the installation and maintenance of navigational aids through the F&E program. This could include the installation of the REILs and MALSR.

STATE AID TO AIRPORTS

In support of the state airport system, the California Transportation Commission (CTC) also participates in state airport development projects. An Aeronautics Account has been established within the State Transportation Fund from which all airport improvement monies are drawn. Tax revenues from the sale of general aviation jet fuel ($0.02 per gallon) and Avgas ($0.18 per gallon) are collected and deposited in the Aeronautics Account to support the state airport system development program.

The California Transportation Commission has established three grant programs to distribute funds deposited into the Aeronautics Account: Annual Grants, Acquisition and Development (A & D) Grants, and AIP Matching Grants. Another funding source provided by the CTC is low interest loans. Each item is briefly discussed below.

Annual Grants

Annual Grants are distributed by the CTC for projects considered "airport and aviation purposes" as defined in the State Aeronautics Act. All public use airports, with the exception of reliever and commercial service airports, are eligible for this annual $10,000 grant.

Acquisition and Development (A & D) Grants

A & D Grants are designed to provide funding to airports for the purpose of land acquisition and development. This grant has a minimum allocation level of $10,000 and provides up to $500,000 per fiscal year (maximum allowable funding to a single airport yearly). Grant requests are initiated through the CIP process and require a local match of 10 to 50 percent of the project's cost. Unlike Annual Grants, all airports are eligible for the A & D Grant.

AIP Matching Grants

The AIP Matching Grant is distributed for the purpose of aiding an airport with the local match of a federally-funded improvement project. In order to be eligible for an AIP Matching Grant, the project must have been included in the State CIP and the sponsor must have accepted a Federal AIP Grant for the project. This grant provides 4.5 percent of the project's eligible cost (i.e. 5 percent of the AIP Grant) and counts towards the yearly $500,000 maximum grant disbursement level. As illustrated by **Exhibit 6A,** a majority of the projects within the CIP reflect eligibility for matching funds provided by the state.

California Airport Loan Program

The loan program provides funding for all airports within the State of California which are owned by an eligible public agency and open to the public without exception. These loans provide funding to eligible airports for construction and land acquisition projects which will benefit the airport and improve its self-sufficiency. The loans can be used for any airport-related project and the funding limits are not bound by law or regulation. The amount of the loan is determined in accordance with project feasibility and the sponsor's financial status. Terms of the loan provide 8 to 15 years for its payback and the interest rate is based upon the most recent state bond sale.

LOCAL FUNDING

The balance of project costs, after consideration has been given to grants, must be funded through local resources. This essentially equates to five percent of the project costs if all eligible FAA and state funds are available.

There are several alternatives for local finance options for future development at the airport, including airport revenues, direct funding from the County, issuing bonds, and leasehold financing. This strategy could be used to fund the five percent matching share, or complete the project if grant funding cannot be arranged.

The capital improvement program has assumed that all landside facility development would be completed privately and that San Bernardino County would complete the necessary infrastructure improvements to support the development.

There are several municipal bonding options available to San Bernardino County including: general obligation bonds, limited obligation bonds, and revenue bonds. General obligation bonds are a common form of municipal bond which is issued by voter approval and is secured by the full faith and credit of the County. County tax revenues are pledged to retire the debt. As instruments of credit, and because the community secures the bonds, general obligation bonds reduce the available debt level of the community. Due to the community pledge to secure and pay general obligation bonds, they are the most secure type of municipal bond and are generally issued at lower interest rates and carry lower costs of issuance. The primary disadvantage of general obligation bonds is that they require voter approval and are subject to statutory debt limits. This requires that they be used for projects that have broad support among the voters, and that they be reserved for projects that have highest public priorities.

In contrast to general obligation bonds, limited obligation bonds (sometimes referred to as a Self-Liquidating Bonds) are secured by revenues from a local source. While neither general fund revenues nor the taxing power of the local community is pledged to pay the debt service, these sources may be required to retire the debt if pledged revenues are insufficient to make interest and principal payments on the bonds. These bonds still carry the full faith and credit pledge of the local community and, therefore, are considered, for the purpose of financial analysis, as part of the debt burden of the local community. The overall debt burden of the local community is a factor in determining interest rates on municipal bonds.

There are several types of revenue bonds, but in general they are a form of municipal bond which is payable solely from the revenue derived from the operation of a facility that was constructed or acquired with the proceeds of the bonds. For example, a Lease Revenue Bond is secured with the income from a lease assigned to the repayment of the bonds. Revenue bonds have become a common form of financing airport improvements. Revenue bonds present the opportunity to provide those improvements without direct burden to the taxpayer. Revenue bonds normally carry a higher interest rate because they lack the guarantees of general and limited obligation bonds.

Leasehold financing refers to a developer or tenant financing improvements under a long term ground lease. The obvious advantage of such an arrangement is that it relieves the community of all responsibility for raising the capital funds for improvements. However, the private development of facilities on a ground lease, particularly on property owned by a municipal agency, produces a unique set of problems. In particular, it is

more difficult to obtain private financing as only the improvements and the right to continue the lease can be claimed in the event of a default. Ground leases normally provide for the reversion of improvements to the lessor at the end of the lease term, which reduces their potential value to a lender taking possession. Also, companies that want to own their property as a matter of financial policy may not locate where land is only available for lease. San Bernardino County has used long term lease arrangements successfully to finance capital improvements at the airport in the past. Most hangar facilities were developed with private funds under a long term ground lease with the County. Future landside facilities are expected to be developed in a similar manner.

PLAN IMPLEMENTATION

The successful implementation of the Chino Airport master plan will require sound judgment on the part of San Bernardino County with regard to the implementation of projects to meeting future activity demands, while maintaining the existing infrastructure and improving this infrastructure to support new development. While the projects included in the capital improvement program have been broken into short, intermediate, and long term planning periods, the County will need to consider the scheduling of projects in a flexible manner and add new projects from time-to-time to satisfy safety or design standards, or newly created demands.

In summary, the planning process requires that San Bernardino County continually monitor the need for new or rehabilitated facilities, since applications (for eligible projects) must be submitted to FAA each year. San Bernardino County should continually monitor, with the FAA, the projects which are required for safety and security.